DOCUMENT RESUME

ED 375 750 HE 027 849

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TITLE An Investigation of the Relationship between Student Work Experience and Student Outcomes.
PUB DATE Apr 94
NOTE 68p.; Paper presented at the Annual Meeting of the American Educational Research Association (New Orleans, LA, April 1994).
PUB TYPE Reports - Research/Technical (143) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Academic Achievement; College Environment; College Outcomes Assessment; Extracurricular Activities; Higher Education; *Outcomes of Education; Private Colleges; State Universities; *Student Attitudes; Student Development; *Student Employment; *Undergraduate Students; *Work Experience

ABSTRACT

This study examined the effect of student work experience on college outcomes, surveying 155 sophomores, juniors, and seniors at two higher education institutions: a small liberal arts college with a work-study emphasis and a large public university with a strong history of work-study programs. Data were collected using the College Student Experiences Questionnaire (CSEQ). The study found that, in general, students who worked in academic or career-related jobs on campus reported higher levels of effort and involvement in a range of areas measured by the CSEQ than students who worked under other circumstances, including use of the library, interactions with faculty, involvement in learning through coursework, writing experiences and activities, and other curricular and extracurricular activities. Specific effects for each area and type of institution are discussed. Students who worked in academic or career-related jobs on campus showed higher estimates of some areas of college gains than students working under other circumstances. A copy of the CSEQ is included. Twenty-five appendixes contain source tables for data gathered by the questionnaire. Contains 33 references. (MDM)

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An Investigation of the Relationship Between Student Work Experience and Student Outcomes

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An Investigation of the Relationship Between Student Work Experience and Student Outcomes

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Introduction and Statement of the Problem

Research in the late 1980s indicated that the majority of undergraduate students had jobs, and almost three-fourths of those who reported employment worked more than 10 hours per week (Boyer, 1987). In comparison, during the late 1950s less than 30% of undergraduates reported working during the academic year (Stern & Nakata, 1991). As more American undergraduates engage in work while they pursue their degrees researchers have sought to determine the possible effects of these experiences on educational performance and overall college experience.

Most students who work have reported doing so for primarily financial reasons, although Adams and Stephens (1970), Metz (1989), Ramsay (1990), and others have claimed that student work experiences can have significant non-pecuniary benefits. A widely accepted tenet among student development professionals is that the out-of-class experiences of students are important to college success, and extracurricular involvement seems to be positively related to educational attainment. However, it is unclear whether there is any kind of causal relationship between various kinds of extracurricular involvement and overall success in college (Pascarella & Terenzini, 1991).

Research on Student Work Experience

Research has suggested both positive and negative relationships between certain aspects of student employment and academic performance, career selection, persistence, and a sense of membership in the campus community (Astin, 1975; Ehrenberg & Sherman, 1987; Pascarella & Staver, 1985). It appears that part-time employment on campus has an overall

positive impact on student persistence (Astin, 1975; McKenzie, 1981) and a positive or neutral effect on educational attainment (Astin, 1975; Hammes & Haller, 1983; Maryland Longitudinal Study, 1988; Stern & Nakata, 1991; Van de Water & Augenblick, 1987). On the other hand, off-campus work, whether full or part-time, seems to have a negative impact on persistence and educational attainment (Anderson, 1981; Ehrenberg & Sherman, 1987; Kohen, Nestel, & Karmas, 1978). The positive effects of student work experiences are even more apparent when the job is related to student interests or career aspirations (Pascarella & Terenzini, 1991).

Student Involvement Theory

Student involvement theory, as developed by Astin (1984, 1985) and Pace (1984) holds that certain kinds of experiences enhance the quality of undergraduate education. As Astin (1985) stated,

> ... the amount of student learning and personal development associated with any educational program is directly proportional to the quality and quantity of student involvement in the program. ... [T]he effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement (p. 36).

Pace (1984) focussed on the idea of "quality of effort", the degree to which students invest in their own learning and development, particularly as evidenced by their use of facilities and involvement in opportunities available at their institution. Student experiences and outcomes, according to Pace, are not a unilateral responsibility of colleges and universities, but part of an interactive process that involves both the quality of the educational setting and opportunities provided and the quality of student efforts to gain from available

resources, opportunities, and experiences.

This brief review of previous research on student work experiences and educational outcomes seems to support the view that work may have beneficial effects for students beyond financial or specific career-oriented factors. The purpose of this study was to further examine the relationship between types of work experiences and the quality of the broader college experiences reported by students. Advocates of work study, such as Adams and Stephens (1970) and Ramsay (1990) hold that student work experiences provide opportunities for greater involvement, growth, and learning that are superior to academic study alone. This was the central hypothesis underlying the research.

Research Questions

The research questions that guided the study grew out of the aim of investigating whether there were differences in the responses of students who reported working in settings related to academic or career interests and the responses of students who reported either not working or working in situations unrelated to their academic or career interests. Remarkably, among the 155 students who provided useable data, only 21 (13.55%) reported that they did not work, effectively eliminating this category from the analysis reported on here. The circumstances surrounding this development will be discussed further below.

Data were collected and analyzed to answer three research questions:

1. Was there a significant difference between students with different work experiences and college types in their estimates of their own college effort and involvement, as measured by the College Student Experiences Questionnaire?

2. Was there a significant difference in assessments of the college environment, as measured by the College Student Experiences Questionnaire, between students with different work experiences and college

types?

3. Was there a significant difference in estimates of college gains, as measured by the College Student Experiences Questionnaire, between students with different work experiences and college types?

Methods and Procedure

Subjects

Data on student college experiences, educational gains, and work history were collected from undergraduate sophomores, juniors and seniors at three institutions of higher education: a small liberal arts institution with a work-study emphasis; a small liberal arts institution without such an emphasis; and a large public university with a strong history of work-study programs.

Instruments

Data were collected using the College Student Experiences Questionnaire (CSEQ), Third Edition (Pace, 1990) (Appendix 1). McCammon, in a review for the Tenth Annual Mental Measurements Yearbook, concluded that the CSEQ was a "well conceived standardized survey that has considerable utility for college educators and administrators" (1989, p. 199). Although McCammon stated that no test-retest or alternate form reliability had been examined, DeCoster (1989) reported that the CSEQ Quality of Effort scales had alpha reliability coefficients ranging from .82 to .92.

This instrument was developed to measure students' investment in their educational experience and to elicit their assessments of various aspects of their college experience. The CSEQ is related to Astin's student involvement theory in its focus on the level of effort students direct toward those activities associated with the learning environment, their involvement in the life of the institution. In addition to measuring student effort, the questionnaire asks students to respond to

statements about the college environment and their progress toward educational goals. For the purposes of the study, students were also asked to respond to questions regarding the type of institution they attended, their current work situation and work situation during the last academic year, and their reasons for working (Appendix 1).

Sampling Plan

A cluster sampling strategy was planned to identify classes that would yield a representative sample of approximately 30 Sophomores, 30 Juniors, and 30 Seniors on each campus, for a total sample of 270 to 300 students. Because data collection took place in the Fall semester, Freshmen were not included in the samples.

The most conservative estimate of needed sample size for the purpose of inferring from the sample to the population was just under 900 (Krejce & Morgan, 1970). However, adjusting the sample size on the basis of cost, time, estimates of design effect, multiple comparison requirements, effect size, and statistical power, and assuming a relatively even distribution of student responses with regard to work settings and opportunities, the proposed sample size could have been adequate in providing data indicative of the potential value of future research in this area (Cohen, 1977; Hinkle, Oliver, & Hinkle, 1985).

Unfortunately, during the course of the study, administrators who insisted on their willingness and ability to collect the data proved unsuccessful in appropriately carrying out the sampling strategies initially planned. As a result, responses from only 15 students at the liberal arts college without a work emphasis were obtained, and over half of those individuals either misidentified their institution or provided incomplete information, rendering the analysis of data from this institution impossible. At the state university, general studies programs that indicated initial willingness to provide access to courses

with representative cross sections of students ultimately refused access to their classes on the grounds that the research did not directly benefit their academic department, resulting in an eleventh hour change in data collection strategy. Data at the university were ultimately collected from students in several sections of a course on the social foundations of American education, thanks to the cooperation of instructors in that program. Data collection at the work-study emphasis liberal arts college was somewhat more successful, although the initial strategy was again compromised by administrators who assured the researcher that there was no need for him to personally supervise data collection but ultimately resorted to an "easier" method of collecting data that resulted in lower than desired numbers and unanswered questions about the representativeness of the sample.

In any case, data were ultimately collected from 84 students at the liberal arts college and 71 at the state university. Due to these variations from the planned sampling protocol, the findings of this study are to be taken as exploratory in nature and not conclusive. Only students who reported working during the academic year were included for analysis, since only 21 students reported that they did not work. This unexpectedly low number placed the focus of the study on the specific relationship between work experiences and various self reported measures of the college experience. As a result of this limitation, these 21 students were ultimately excluded from the analysis.

Data Analysis

Factorial analysis of variance was employed to compare groups defined by the independent variables institution type, work setting, and work situation, defined operationally as liberal arts college or public university, working on or off campus, and whether or not the work experience was related to academic or career interests. The dependent

variables were student responses to items on the CSEQ regarding quality of effort in participation in the various elements of the campus community, assessments of the institutional environment, and estimates of gains in valued educational and personal outcomes of higher education.

The analysis was conducted using the general linear model procedure of the Statistical Analysis Software (SAS) package. Type III sums of squares were calculated for the analysis of variance procedures in order to account for unequal but nonzero cell sizes and the presence of significant interaction of the main effects. The Type III sum of squares procedure tests the hypothesis as it would under Yates Weighted Squares of Means Technique and has the following characteristics:

1. the hypothesis for an effect does not involve parameters of other effects except for containing effects, which must be involved to be estimable;

2. the hypotheses to be tested are invariant to the ordering of the effects in the model;

3. the hypotheses are the same hypotheses that are tested if there are no missing cells (the hypotheses are not functions of the cell counts); and

4. the sums of squares do not normally add up to the model sums of squares due to adjustments in the calculations (SAS Institute, 1987).

Given the relative limitations of the study resulting from the difficulties in data collection, statistically significant findings were taken to be no more than suggestive of possible explanation of the complex relationships between student work experiences and student outcomes at the undergraduate level, and indicative of possible future directions for further research.

Findings

The first research question asked whether there were significant differences between students with different work experiences and college types in their estimates of their own college effort and involvement, as measured by the College Student Experiences Questionnaire. In general, students who worked in academic or career related jobs on campus reported higher levels of effort and involvement in a range of areas measured by the CSEQ. These areas included measures of the quality of student effort in the use of the library, interactions with faculty, involvement in learning through coursework, in use of student union facilities, in opportunities to experience the arts, music, and theatre, in use of or participation in campus athletic and recreation facilities, in participation in campus clubs and organizations, in personal interactions with others and individual development experiences, in writing experiences and activities, in interactions with student acquaintances, in experiencing science related activities and facilities, and in experiences related to campus residence facilities and student residence life. Student experiences in each area were measured with ten items relating specifically to the area.

For each of the areas of student experience noted above comparisons were made on the basis of institution type, work setting, and whether the work was related to interests. In the following paragraphs the findings resulting from these comparisons are described:

a. quality of experience with library facilities - the main effects of institution type and working on or off campus were significant, as those at the public university reported more positive experiences than those who attended the liberal arts college and those who reported working on campus reported more library use than those who reported working off campus. Of greater interest was the significant interaction

of working on or off campus and work related to academic or career interests (Appendix 2). Students who reported working on campus in academic or career related positions also reported significantly higher levels of experience in the library than those in positions not related to academic or career interests. Those who reported working off campus in positions related to academic or career interests also reported the lowest level of experience in the library (Figure 1).

b. quality of experience with student acquaintances - only the main effect of working on or off campus was significant, as those who reported working on campus reported higher levels of experience with student acquaintances than those who reported working off campus. No interaction effects were significant (Appendix 3).

c. quality of experience with faculty - the main effect of working on or off campus was again significant, as well as the interaction effect of working on or off campus by whether or not the job was related to academic or career interests (Appendix 4). Those who worked on campus reported higher levels of interaction with faculty. Those who reported working in academic or career related positions also reported higher levels of experience with faculty if they worked on campus, but students reported significantly lower reported much lower levels of interaction if they worked off campus in a position related to academic or career interests. Students who worked in positions not related to their career or academic interests reported a lower level of interaction if they worked on campus, and that level was little different for those who worked off campus in positions unrelated to academic or career interests (Figure 2).

d. quality of experience in courses - only the interaction effect of institutional type by working on or off campus was significant (Appendix 5). While students who attended a public university and worked on

FIGURE 1

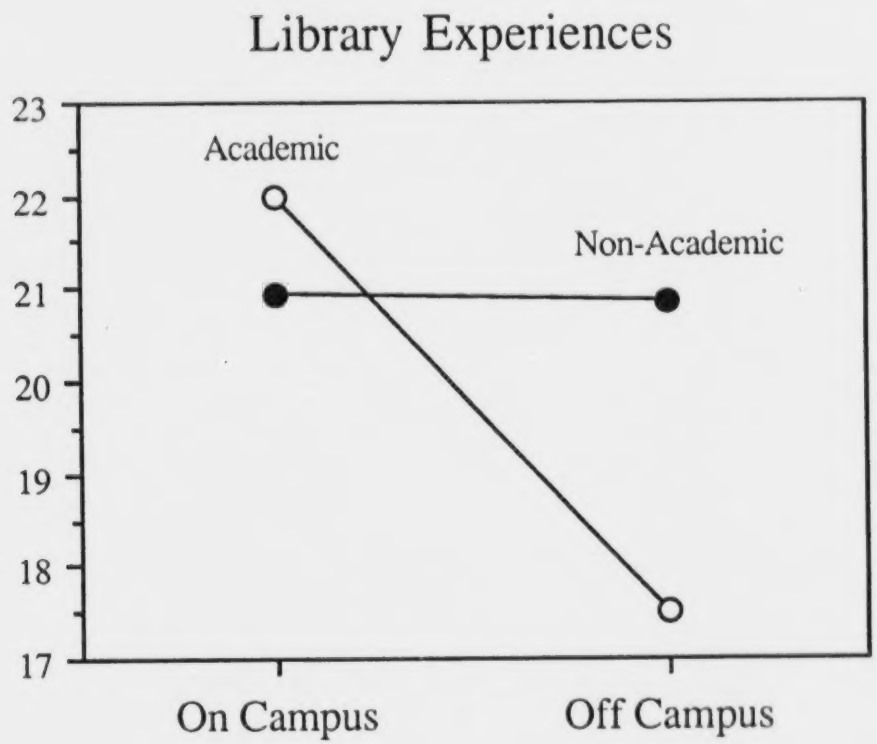
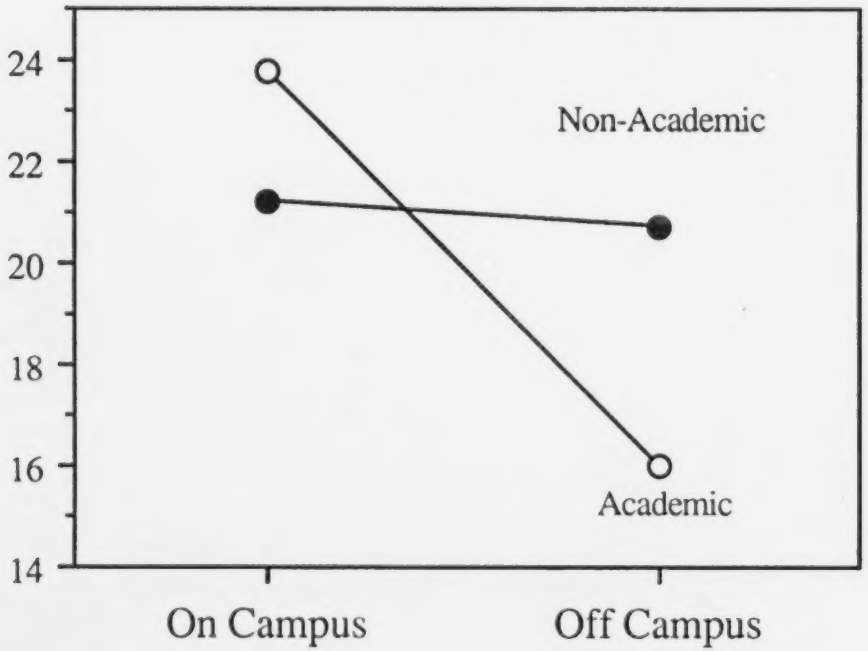

Library Experiences
23
22
21
20
19
18
17
Academic
Non-Academic
On Campus
Off Campus

FIGURE 2

Experiences with Faculty



campus reported higher levels of course experiences than those in a liberal arts college, the positions were reversed for those who worked off campus, as liberal arts college students who worked off campus reported higher levels of course experience than public university students who worked off campus (Figure 3).

e. quality of experience in art, music, and theatre - only the main effect of working on or off campus was significant, as students who worked on campus reported significantly higher levels of experience with art, music, and theatre resources on campus (Appendix 6).

f. quality of experience with the student union - the main effect of on or off campus employment was significant, as those who worked on campus reported higher levels of experience with the student union than students employed off campus (Appendix 7). The interaction effect of working on or off campus by whether the job was related to academic or career interests was also significant, as those who worked on campus in a job related to their academic or career interests reported higher levels of experience with the student union than those who worked either on or off campus in a job not related to career or academic interests. However, those who reported working off campus in academically or career related positions had a lower level of experience than those who reported working off campus in a job not related to academic or career interests (Figure 4).

g. quality of experience with athletics - only the main effect of working on or off campus was significant, as those who worked on campus reported significantly higher levels of experience with campus athletic events and facilities than those who worked off campus (Appendix 8).

h. quality of experience with clubs - again, only the main effect of working on or off campus was significant, as those who worked on campus reported significantly higher levels of experience with campus clubs or

FIGURE 3

Course Learning

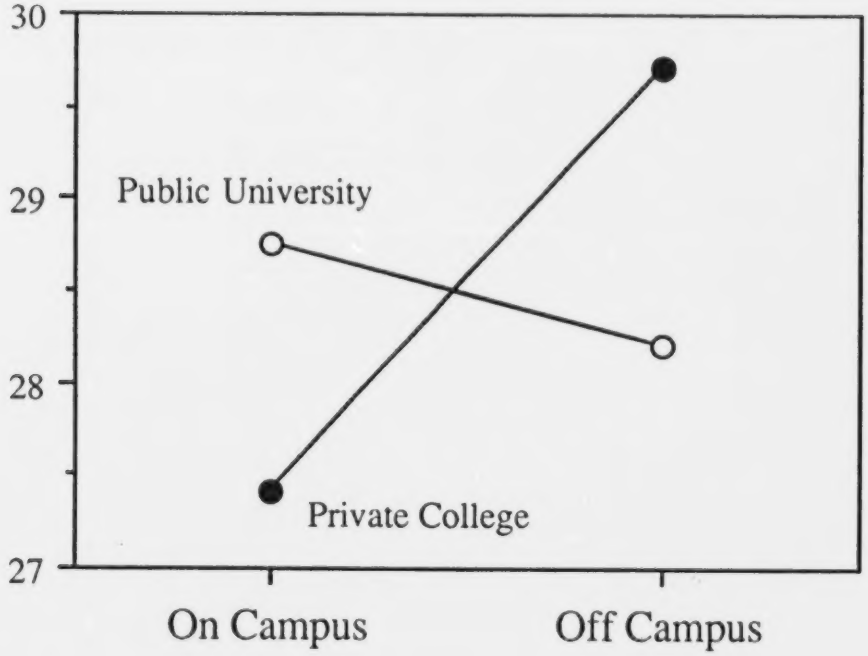
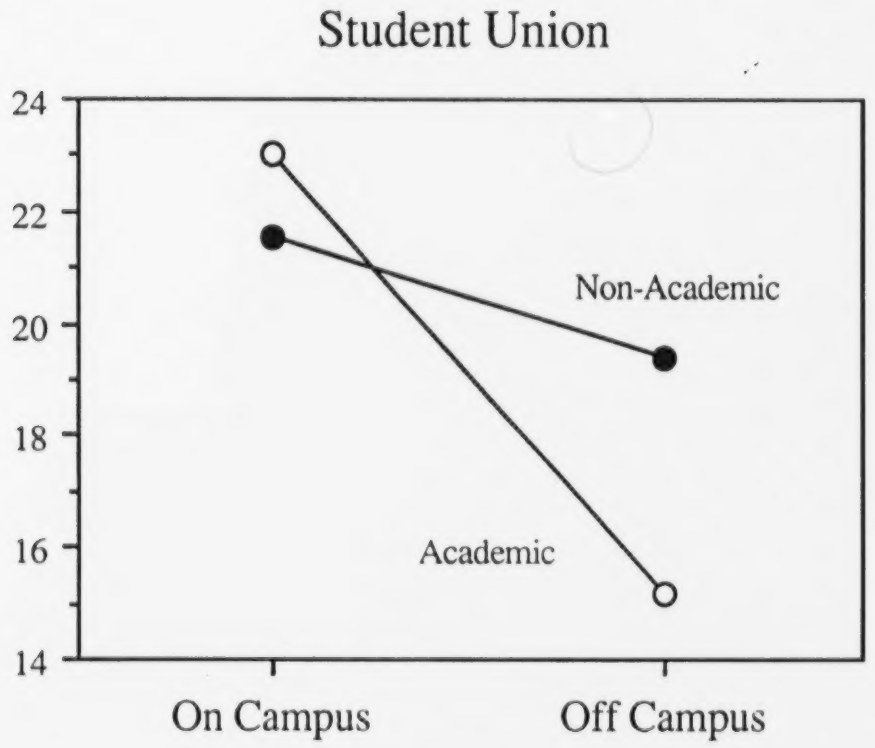


FIGURE 4


Student Union
24
22
20
18
16
14
Non-Academic
Academic
On Campus
Off Campus

organizations (Appendix 9).

i. quality of experience with writing - no significant differences were found, regardless of work setting or experience (Appendix 10).

j. quality of personal experiences - again, only the main effect of working on or off campus was significant, with those working on campus reporting higher levels of personal experiences (Appendix 11).

k. quality of experience with science - no significant effects were observed (Appendix 12).

l. quality of experience with residence facilities and residence life - only on or off campus was significant, as those who worked on campus reported higher levels. However, the vast majority of students in these groups reported that they worked on campus, and others did not provide data, resulting in empty cells. This analysis should not be taken as a meaningful indication of any effect (Appendix 13).

In all, of the twelve areas of student experience measured by the CSEQ, working on or off campus was a significant main effect for nine. In four areas, library, faculty, courses, and student union, interaction effects were present, and each involved the variable of on or off campus employment. For both faculty and student union whether the job was related to academic or career interests was significant, while for courses, the interaction of institution type and on or off campus employment was significant (Table 1). These findings suggest that on or off campus work was the single most important to the quality of student experiences of the variables examined. On campus employment was related to higher levels of experience on eight of the eleven dimensions of student experience measured by the CSEQ.

Table 1

Significant Effects of Work and Student Effort

CSEQ Variable	Main Effect	Interaction Effect
Library	Institution Campus	Campus X Academic
Acquaintances	Campus	----------
Faculty	Campus	Campus X Academic
Courses	----------	Institution X Campus
Arts, Music, Theat.	Campus	----------
Student Union	Campus	Campus X Academic
Athletics	Campus	----------
Clubs	Campus	----------
Writing	----------	----------
Personal	Campus	----------
Science	----------	----------
Residence Halls	Campus	----------

The second research question asked if there was a significant difference in assessments of the college environment, as measured by the College Student Experiences Questionnaire, between students with different work experiences and college types. Student assessments of their college environment were measured by the CSEQ on five items relating to the relative emphasis of the institution on:

a. the development of academic, scholarly, and intellectual qualities;

b. the development of aesthetic, expressive, and creative qualities;

c. being critical, evaluative, and analytical;

d. the development of vocational and occupational competence; and

e. the personal relevance and practical relevance of coursework.

In addition, an overall satisfaction index created by combining scores from responses to an additional two items: one that asked how well the student liked college, and the other that asked if the student would recommend the college to a friend. Data analysis suggested no significant relationship between the type of institution attended, work situation, and students' assessments of the college environment, with the exception of the degree to which the campus environment was judged to foster the development of vocational competence. Institution type, work setting, and the nature of the work experience did not observably affect student assessments of their respective institutions in the areas of academic, aesthetic, analytical, or practical values, or in their overall satisfaction with the institution they were attending (Appendices 14, 15, 16, 18, 19). The sole area where significant effects were apparent was that of fostering vocational competence.

In reviewing student ratings of the institutional environment in emphasizing the development of vocational and occupational competence, the interaction of working on or off campus by whether the job was related to academic or career interests was significant. Students who reported working on campus in academic or career related jobs also reported higher ratings of the college environment for fostering vocational and occupational competence. Those who reported working on campus in positions not related to academic or career interests had significantly lower ratings of the campus in this regard, but those who worked off campus in non-academic or career related jobs showed higher ratings than those who worked off campus in jobs related to academic or career interests (Figure 5). This may be an artifact of the data base, or perhaps those students who worked off-campus in non-academic or career related jobs rated their institution higher because they saw

their classroom and other on-campus experiences as being more supportive of career aspirations than their off-campus jobs.

The three way interaction of institution type, on or off campus employment, and whether the job was related to academic or career interests was also significant. The highest ratings came from public university students who worked on campus in a position related to academic or career interests (Figure 6). For all other groups the ratings were higher for those who worked off-campus, and the public university students who worked off campus in a job related to their interests had the lowest ratings of their institution as a place that fostered vocational competence (Appendix 17). Further research could do much to clarify the relationships suggested by these data.

The third research question asked if there was a significant difference in estimates of college gains, as measured by the College Student Experiences Questionnaire, between students with different work experiences and college types. Students who worked in academic or career related jobs on campus showed higher estimates of some areas of college gains than students who reported working under other circumstances. The CSEQ asked students to assess the gains they felt they had made over the course of their college careers with 23 items pertaining specifically to vocational training, specialization for further education, general education, career information, understanding of the arts, acquaintance with literature, writing clearly and effectively, familiarity with computers, awareness of other philosophies, development of personal values and ethics, understanding of self, understanding of other people, ability to work as a member of a team, development of personal health and fitness, understanding of the sciences and technology, ability to think analytically, ability to think quantitatively, ability to synthesize ideas, ability to learn on one's own, appreciation for history, and

FIGURE 5

Emphasis on Vocational and Occupational Competence

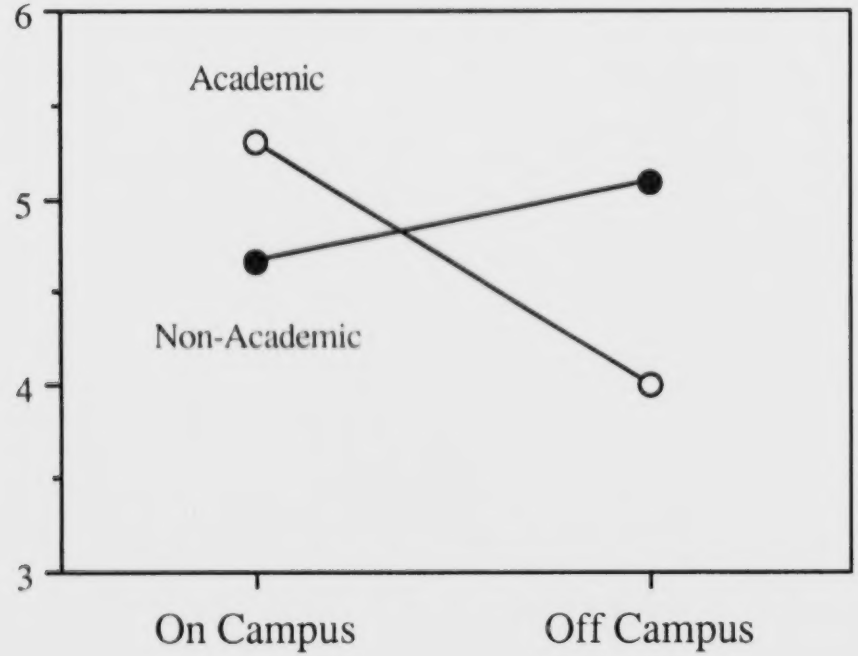
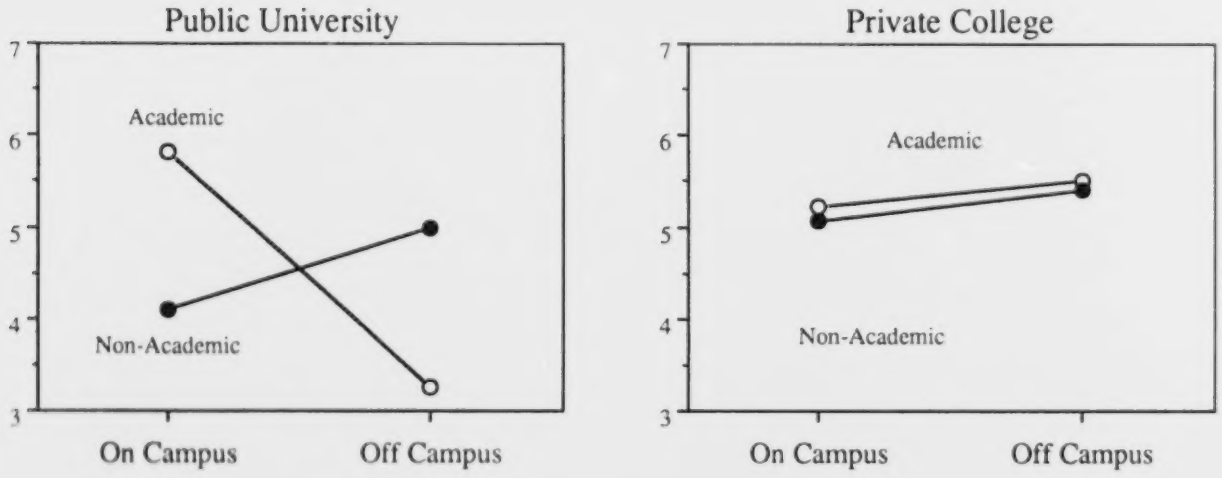


FIGURE 6

Emphasis on Vocational and Occupational Competence



general knowledge about the world. A composite summary index was calculated as a grand mean of the responses to all of these items. Factor analysis was used to identify five factors that subsumed the above items as follows:

a. analytic gains included student responses to items on general education, writing, analytical thinking, quantitative thinking, ability to synthesize information, self-directed learning, and appreciation of history.

b. liberal arts gains included student responses to items on the arts, literature, philosophy, values, self-understanding, and general knowledge about the world.

c. science gains included student responses to items on science, technology, and the consequences of technology.

d. vocational gains included student responses to items on vocational training, specialized education, preparation for a career, and familiarity with computers.

e. behavioral gains included student responses to items on understanding others, learning to work as a team member, and personal fitness and health.

Factorial analysis of variance was conducted to compare students, using these five factors as dependent variables, with institution type, work on or off campus, and work related to academic or career interests as independent variables.

Analysis of the composite summary index of student estimates of their college gains revealed a significant main effect of on or off campus employment. Two significant interactions were also observed: institution type by work academically or career related or not, and work on or off campus by work academically or career related or not. Students at public universities who worked in jobs related to academic or

career interests reported higher estimates of overall college gains than those in liberal arts colleges, although those in liberal arts colleges who reported working in jobs not related to academic or career interests reported higher levels of gains than public university students in non-academic or career related positions. Students who reported working on campus in academic or career related jobs also reported higher levels of gains than those who worked on campus in non-academic or career related positions, although those in academically or career related positions who worked off campus reported lower overall gains than those who worked off campus in jobs not related to academic or career interests (Appendix 20).

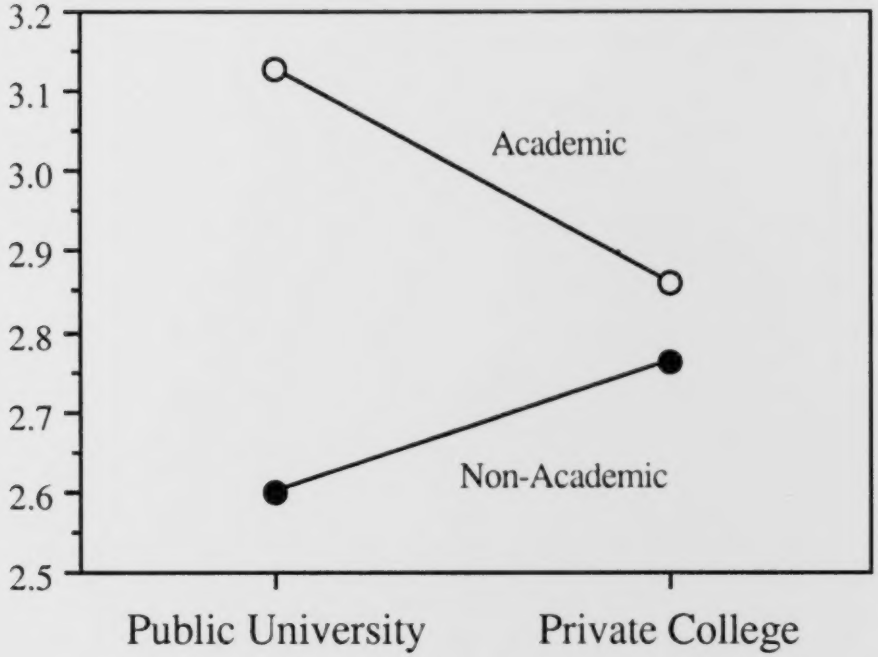
On the more specific dimensions of gains measured the following significant effects were observed:

a. estimated gains in analytic ability - the interaction effect of institution type by academic or career related work was significant (Figure 7). Public university students who worked in positions related to academic or career interests reported higher analytic gains than liberal arts college students in such positions. Liberal arts students in non-academically or career related positions had slightly higher estimates of analytic gains than their public university peers, although both were lower than the academically or career related work group (Appendix 21).

b. estimated gains in the liberal arts - the interaction effect of working on or off campus by academic or career related work was significant. Students who worked on campus in academic or career related jobs had significantly higher estimates of their gains in the liberal arts than those in positions not related to academic or career interests. Among students who reported working off campus, those in academic or career related positions reported lower estimated gains than those in

FIGURE 7

Gain in Analytical/Technical Skills



jobs unrelated to academic or career interests (Appendix 22).

c. estimated gains in science - the main effect of on or off campus employment was significant. Those who reported working on campus reported greater gains. The interaction effects of institution type by academic or career related work (Figure 8) and on or off campus by academic or career related work were significant. Public university students who worked in academic or career related positions reported higher levels of gains in the sciences than their liberal arts college counterparts, while liberal arts college students who worked in positions not related to academic or career interests reported higher levels of estimated gains than public university students in similar positions. Students who reported working on campus in academic or career related positions reported higher estimates of gains in science than those in non-academic or career related positions. These estimates dropped precipitously for students who worked off campus. Students who reported working off campus in positions unrelated to academic or career interests also reported higher estimates of gains in science than those who reported working in academically or career related positions off campus (Appendix 23).

d. estimated gains in vocational competence - the interaction effect of institution type by academic or career related work and on or off campus by academic or career related work was found to be significant (Figure 9). Students at public universities who worked in academically or career related positions reported higher estimates of gains in vocational competence than liberal arts college students in such positions. Although estimates of gains were much lower for both groups if they reported working in positions not related to academic or career interests, the liberal arts college students reported higher gains under these circumstances. Students who worked on campus in academically or

FIGURE 8

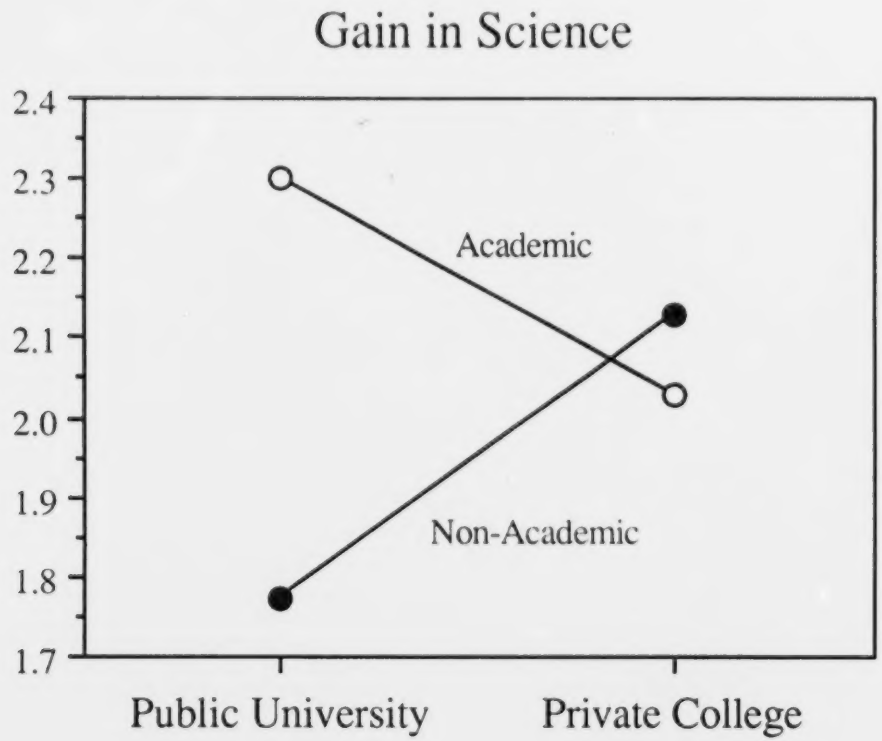
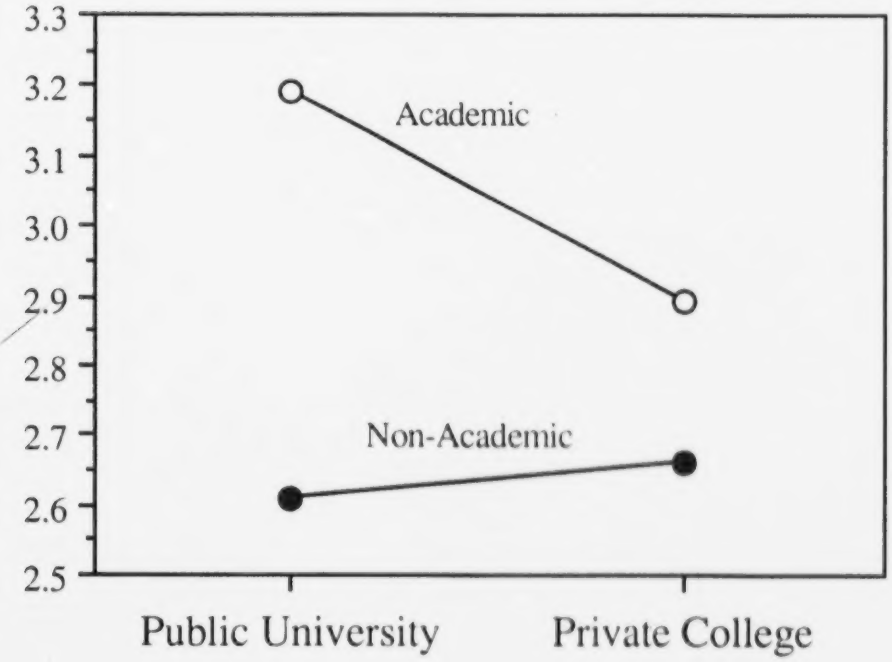

Gain in Science
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
Academic
Non-Academic
Public University
Private College

FIGURE 9

Gain in Vocational Understanding



career related positions had higher estimated gains than those who worked in such positions off campus. Students who worked off campus in jobs related to academic or career interests reported higher estimates of vocational gains than those on campus in non-academically or career related positions (Appendix 24).

e. estimated gains in adaptive behavior - only the main effect of on or off campus was significant. Students who reported working on campus reported higher estimates of gains in adaptive behaviors than those who reported working off campus (Appendix 25).

Working on or off campus was a significant main for the overall composite gain index, but appeared so only on the specific dimensions of science and behavior gains. Interaction effects of campus by academically or career related work were present for the overall measure, liberal arts, science, and vocation - in each case indicating that working on campus in academically or career related positions was related to significantly higher estimates of college gains. For the overall measure of gains, analytic, science, and vocation, the interaction of institution type by academically or career related job was observed to be significant, indicating that public university students in jobs related to academic or career interests reported higher levels of gains for these areas than other students (Table 2).

Table 2

Work and Student Estimates of College Gains

CSEQ Variable	Main Effect	Interaction Effect
Overall Index	Campus	Institution X Academic
		Campus X Academic
Analytic	----------	Institution X Academic
Liberal Arts	----------	Campus X Academic
Science	Campus	Institution X Academic
		Campus X Academic
Vocational	----------	Institution X Academic
		Campus X Academic
Behavior	Campus	----------

Discussion

The purpose of this study was to see if there appeared to be identifiable differences in estimates of personal effort, involvement, and educational gains between students in different work and institutional settings. These findings, although exploratory due to sampling difficulties, suggest that students who worked in academic or career related jobs on campus generally reported higher estimates of involvement in the life of the college or university they attended.

Reviewing the findings suggests the following observations on each of the three research questions:

1. The findings related to the quality of student experience may reflect a relative emphasis of the CSEQ on campus based experiences, which seem logically to be more prevalent for students who spend a greater degree of their time and energy engaged in activities on campus. That is, those who take classes and work on campus would be more likely

to report the kinds of on campus experiences asked about on the CSEQ than students who only take classes on campus. The significant interaction effect of campus work by academically related work for library and faculty experiences may relate particularly to students who work on campus for faculty or staff in discipline-based departments, research projects, or other academic settings in which they come in regular contact with faculty and staff and may be called upon to more frequently utilize library resources. Further, the significant main effect of institution type for library may be a reflection of the vastly greater library resources available at the public university than at the liberal arts college.

2. Student ratings of institutional environment on the CSEQ showed significant effects for the variables examined only in the area of the relative emphasis of the institution on the development of vocational and occupational competence. Those rating their institution highest on this dimension were those who worked on campus in positions related to their academic or career interests. The fact that only the area of vocational competence was significantly related to the working situations under study did not seem to lend support to the contention that certain types of work experiences can enhance the quality of undergraduate education beyond vocational applications, although the nature of the items on the CSEQ relates specifically to assessments of the institutional environment and not to actual gains or competencies.

3. The area of estimated college gains was the only one in which there were consistent differences between institution types, and then particularly in areas of analytical skills, science knowledge and vocational skills. These differences may relate to the differing missions of such institutions as much as to any systematic difference in the quality of student experiences.

In reviewing the data overall, it seems clear that much further research is needed to determine if there is a real difference in the quality of student experience that is significantly explained by work experiences and not by some other factor or combination of factors. On reflection it seems logical to suggest the possibility that the generally more positive experiences and perspectives reported by students who worked on campus in positions related to academic or career interests had more to do with characteristics that led to their selection for such positions in the first place than with their subsequent employment in such positions. Since the hiring process typically involves screening and selection, the conditions of work (on or off campus, related to interests or not) are clearly not randomly assigned, but are related to individual characteristics.

Though these possible selection conditions make comparisons of the type reported here problematic, they do not obviate the need for study of these experiences. Even if those in certain types of job situations would show higher outcomes regardless, these data suggest the potential of work to support valued outcomes, as Metz (1989) suggested, related to reinforcement of classroom learning, acquisition of career relevant skills, development of interpersonal skills, and enhancement of a sense of achievement.

The assessment movement of the 1980s was a strong expression of the desire among public and private constituencies of higher education for more definitive evidence of institutional effectiveness in preparing students to take their places as competent members of the economic, social, and political community. This trend toward more visible assessment activities and evidence of broad based institutional effectiveness underscores the need for educators to learn more about the complete experiences of students, not only in the classroom, but in all aspects

of college life and programming.

If there are significant, identifiable benefits to students under certain work conditions, the implications for higher education may be great, particularly in light of current discussions of improved programs for fostering community among students on campuses, the relative merits of student community service programs, and experiential learning. Better understanding of these experiences could reveal at least some kinds of student work as partners to academic programs, more than an economic necessity or a distraction from more traditional notions of undergraduate education. The relationships and interactions suggested in these data support the value of further research in the full range of settings in which students work and study.

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Appendix 1

College Student Experience Questionnaire

COLLEGE STUDENT EXPERIENCES

QUESTIONNAIRE

The main purpose of this inquiry is to learn more about how students spend their time — in course work, in the library, in contacts with faculty, in extracurricular activities, in various social and cultural activities, and in using other facilities and opportunities that exist on the college campus.

The information obtained from you and from other students at many different colleges and universities should provide new insight to administrators, faculty members, and others who provide the resources and shape the programs that are meant to be of benefit for student learning and development within the college experience.

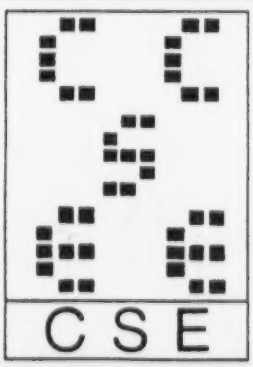
At first glance you may think it will take a long time to fill out this questionnaire, but you will find that it can be answered quite easily, that you can do it in less than an hour and perhaps only 30 to 45 minutes. You will find, too, when you have finished it, that your answers provide a kind of self-portrait of what you have been giving and getting in your college experience.

The benefit from this or any other survey depends on the thoughtful responses and willing participation of those who are asked to help. Your willingness to participate is important and very much appreciated.

We do not ask you to write your name in this questionnaire; but we do need to know where the reports come from, and that is why each questionnaire has a number on the back page—certain blocks of numbers tell us that those questionnaires have come from your college.

And, as you will see on the next page, we need to know a few things about you and where you come from, so that we can learn how activities might be related to age, sex, year in college, major field, whether one lives on the campus, whether one has a job, etc.

The questionnaire responses will be read by an electronic scanning device. **Please use a #2 black lead pencil.** Be careful in marking your responses. Do not write or make any marks on the questionnaire outside the spaces provided for your answers.



This questionnaire is available through the Center for the Study of Evaluation, UCLA Graduate School of Education, 405 Hilgard Ave., Los Angeles, CA 90024. It is intended for use by any college or university that wishes to have an inventory of the campus experiences of its students.

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Revised Third Edition 1990

BACKGROUND INFORMATION

DIRECTIONS: Indicate your response by filling in the appropriate space under each question.

Age
- ○ 22 or younger
- ○ 23–27
- ○ 28 or older

Sex
- ○ male
- ○ female

Are you single or married?
- ○ single
- ○ married

What is your classification in college?
- ○ freshman
- ○ sophomore
- ○ junior
- ○ senior
- ○ graduate student

Did you enter college here or did you transfer here from another college?
- ○ entered here
- ○ transferred from another college

Have you at any time while attending this college lived in a college dormitory, fraternity or sorority house, or other college housing?
- ○ yes
- ○ no

Where do you now live during the school year?
- ○ dormitory or other college housing
- ○ fraternity or sorority house
- ○ private apartment or room within walking distance of the college
- ○ house, apartment, etc. away from the campus
- ○ with my parents or relatives

At this college, up to now, what have most of your grades been?
- ○ A
- ○ A–, B+
- ○ B
- ○ B–, C+
- ○ C, C–, or lower

Which of the following comes closest to describing your major field of study (or your expected major)?
- ○ Agriculture
- ○ Arts (art, music, theater, etc)
- ○ Biological Sciences (biology, biochemistry, botany, zoology, etc.)
- ○ Business
- ○ Computer Science
- ○ Education
- ○ Engineering
- ○ Health related fields (nursing, physical therapy, health technology, etc.)
- ○ Humanities (literature, history, philosophy, religion, etc.)
- ○ Physical Sciences (physics, chemistry, mathematics, astronomy, earth science, etc.)
- ○ Social Sciences (economics, political science, psychology, sociology, etc.)
- ○ Foreign Languages (French, Spanish, etc.)
- ○ Area Studies (Latin American Studies, Russian Studies, Asian Studies, African Studies, etc.)
- ○ Interdepartmental majors (international relations, ecology, women's studies, etc.)
- ○ Other: What? ⟶ [ ]
- ○ Undecided

Did either of your parents graduate from college?
- ○ no
- ○ yes, both parents
- ○ yes, father only
- ○ yes, mother only

When, or if, you graduate from college, do you expect to enroll for a more advanced degree?
- ○ yes
- ○ no

Are you going to school full-time or part-time?
- ○ full-time
- ○ part-time

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During the time school is in session, about how many hours a week do you usually spend on activities that are related to your school work? This includes time spent in class and time spent studying.

- ○ about 50 hours a week or more
- ○ about 40 hours a week
- ○ about 30 hours a week
- ○ about 20 hours a week
- ○ less than 20 hours a week

During the time school is in session, about how many hours a week do you usually spend working on a job?

- ○ none. I am not employed during the school year.
- ○ about 10 hours or less
- ○ about 15 hours
- ○ about 20 hours
- ○ about 30 hours
- ○ more than 30 hours

About how much of your college expenses this year are provided by your parents or family?

- ○ all or nearly all
- ○ more than half
- ○ less than half
- ○ none or very little

What is your racial or ethnic identification?

- ○ American Indian
- ○ Asian or Pacific Islander
- ○ Black, African American
- ○ Hispanic, Latino
- ○ White
- ○ Other: What?

COLLEGE ACTIVITIES

DIRECTIONS: In your experience at this college during the current school year, about how often have you done each of the following? Indicate your response by filling in one of the spaces to the left of each statement.

Very often	Often	Occasionally	Never	Library Experiences
○	○	○	○	Used the library as a quiet place to read or study materials you brought with you.
○	○	○	○	Used the card catalogue or computer to find what materials there were on some topic.
○	○	○	○	Asked the librarian for help in finding material on some topic.
○	○	○	○	Read something in the reserve book room or reference section.
○	○	○	○	Used indexes (such as the Reader's Guide to Periodical Literature) to journal articles.
○	○	○	○	Developed a bibliography or set of references for use in a term paper or other report.
○	○	○	○	Found some interesting material to read just by browsing in the stacks.
○	○	○	○	Ran down leads, looked for further references that were cited in things you read.
○	○	○	○	Gone back to read a basic reference or document that other authors had often referred to.
○	○	○	○	Checked out books to read (not textbooks).

Very often	Often	Occasionally	Never	Experiences with Faculty
○	○	○	○	Talked with a faculty member.
○	○	○	○	Asked your instructor for information related to a course you were taking (grades, make-up work, assignments, etc.).
○	○	○	○	Visited informally and briefly with an instructor after class.
○	○	○	○	Made an appointment to meet with a faculty member in his/her office.
○	○	○	○	Discussed ideas for a term paper or other class project with a faculty member.
○	○	○	○	Discussed your career plans and ambitions with a faculty member.
○	○	○	○	Asked your instructor for comments and criticisms about your work.
○	○	○	○	Had coffee, cokes, or snacks with a faculty member.
○	○	○	○	Worked with a faculty member on a research project.
○	○	○	○	Discussed personal problems or concerns with a faculty member.

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DIRECTIONS: In your experience at this college during the current school year, about how often have you done each of the following? Indicate your response by filling in one of the spaces to the left of each statement.

Course Learning

Very often | Often | Occasionally | Never

- ○○○○ Took detailed notes in class.
- ○○○○ Participated in class discussions.
- ○○○○ Underlined major points in the readings.
- ○○○○ Tried to see how different facts and ideas fit together.
- ○○○○ Thought about practical applications of the material.
- ○○○○ Worked on a paper or project where you had to integrate ideas from various sources.
- ○○○○ Summarized major points and information in your readings or notes.
- ○○○○ Tried to explain the material to another student or friend.
- ○○○○ Made outlines from class notes or readings.
- ○○○○ Did additional readings on topics that were introduced and discussed in class.

Art, Music, Theater

Very often | Often | Occasionally | Never

- ○○○○ Talked about art (painting, sculpture, architecture, artists, etc.) with other students at the college.
- ○○○○ Gone to an art gallery or art exhibit on the campus.
- ○○○○ Read or discussed the opinions of art critics.
- ○○○○ Participated in some art activity (painting, pottery, weaving, drawing, etc.).
- ○○○○ Talked about music (classical, popular, musicians, etc.) with other students at the college.
- ○○○○ Attended a concert or other music event at the college.
- ○○○○ Read or discussed the opinions of music critics.
- ○○○○ Participated in some music activitiy (orchestra, chorus, etc.).
- ○○○○ Talked about the theater (plays, musicals, dance, etc.) with other students at the college.
- ○○○○ Seen a play, ballet, or other theater performance at the college.
- ○○○○ Read or discussed the opinions of drama critics.
- ○○○○ Participated in or worked on some theatrical production (acted, danced, worked on scenery, etc.).

Student Union

Very often | Often | Occasionally | Never

- ○○○○ Had meals, snacks, etc. at the student union or student center.
- ○○○○ Looked at the bulletin board for notices about campus events.
- ○○○○ Met your friends at the student union or student center.
- ○○○○ Sat around in the union or center talking with other students about your classes and other college activities.
- ○○○○ Used the lounge(s) to relax or study by yourself.
- ○○○○ Seen a film or other event at the student union or center.
- ○○○○ Attended a social event in the student union or center.
- ○○○○ Heard a speaker at the student union or center.
- ○○○○ Played games that were available in the student union or center (ping-pong, cards, pool, pinball, etc.).
- ○○○○ Used the lounge(s) or meeting rooms to meet with a group of students for a discussion.

Athletic and Recreation Facilities

Very often | Often | Occasionally | Never

- ○○○○ Set goals for your performance in some skill.
- ○○○○ Followed a regular schedule of exercise, or practice in some sport, on campus.
- ○○○○ Used outdoor recreational spaces for casual and informal individual athletic activities.
- ○○○○ Used outdoor recreational spaces for casual and informal group sports.
- ○○○○ Used facilities in the gym for individual activities (exercise, swimming, etc.).
- ○○○○ Used facilities in the gym for playing sports that require more than one person.
- ○○○○ Sought instruction to improve your performance in some athletic activity.
- ○○○○ Played on an intramural team.
- ○○○○ Kept a chart or record of your progress in some skill or athletic activity.
- ○○○○ Was a spectator at college athletic events.

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DIRECTIONS: In your experience at this college during the current school year, about how often have you done each of the following? Indicate your response by filling in one of the spaces to the left of each statement.

Very often | Often | Occasionally | Never

Clubs and Organizations

- Looked in the student newspaper for notices about campus events and student organizations.
- Attended a program or event put on by a student group.
- Read or asked about a club, organization, or student government activity.
- Attended a meeting of a club, organization, or student government group.
- Voted in a student election.
- Discussed policies and issues related to campus activities and student government.
- Worked in some student organization or special project (publications, student government, social event, etc.).
- Discussed reasons for the success or lack of success of student club meetings, activities, or events.
- Worked on a committee.
- Met with a faculty adviser or administrator to discuss the activities of a student organization.

Very often | Often | Occasionally | Never

Experience in Writing

- Used a dictionary or thesaurus to look up the proper meaning of words.
- Consciously and systematically thought about grammar, sentence structure, paragraphs, word choice, and sequence of ideas or points as you were writing.
- Wrote a rough draft of a paper or essay and then revised it yourself before handing it in.
- Spent at least five hours or more writing a paper (not counting time spent in reading or at the library).
- Asked other people to read something you wrote to see if it was clear to them.
- Referred to a book or manual about style of writing, grammar, etc.
- Revised a paper or composition two or more times before you were satisfied with it.
- Asked an instructor for advice and help to improve your writing.
- Made an appointment to talk with an instructor who had criticized a paper you had written.
- Submitted for publication an article, story, or other composition you had written.

Very often | Often | Occasionally | Never

Personal Experiences

- Told a friend why you reacted to another person the way you did.
- Discussed with other students why some groups get along smoothly, and other groups don't.
- Sought out a friend to help you with a personal problem.
- Elected a course that dealt with understanding personal and social behavior.
- Identified with a character in a book or movie and wondered what you might have done under similar circumstances.
- Read articles or books about personal adjustment and personality development.
- Taken a test to measure your abilities, interests, or attitudes.
- Asked a friend to tell you what he/she really thought about you.
- Been in a group where each person, including yourself, talked about his/her personal problems.
- Talked with a counselor or other specialist about problems of a personal nature.

Very often | Often | Occasionally | Never

Student Acquaintances

- Made friends with students whose academic major field was very different from yours.
- Made friends with students whose interests were very different from yours.
- Made friends with students whose family background (economic and social) was very different from yours.
- Made friends with students whose age was very different from yours.
- Made friends with students whose race was different from yours.
- Made friends with students from another country.
- Had serious discussions with students whose philosophy of life or personal values were very different from yours.
- Had serious discussions with students whose religious beliefs were very different from yours.
- Had serious discussions with students whose political opinions were very different from yours.
- Had serious discussions with students from a country different from yours.

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DIRECTIONS: In your experience at this college during the current school year, about how often have you done each of the following?

Very often	Often	Occasionally	Never	Science
○	○	○	○	Memorized formulas, definitions, technical terms.
○	○	○	○	Tried to express a set of relationships in mathematical terms.
○	○	○	○	Tested your understanding of some scientific principle by seeing if you could explain it to another student.
○	○	○	○	Read articles (not assigned) about scientific theories or concepts.
○	○	○	○	Practiced to improve your skill in using some laboratory equipment.
○	○	○	○	Showed a classmate how to use a piece of scientific equipment.
○	○	○	○	Attempted to explain an experimental procedure to a classmate.
○	○	○	○	Went to an exhibit or demonstration of some new scientific device.
○	○	○	○	Completed an experiment or project using scientific methods.
○	○	○	○	Tried to explain to another person the scientific basis for concerns about pollution, recycling, alternative sources of energy, acid rain, or similar aspects of the world around you.

DIRECTIONS: If you are now living in a dormitory or fraternity/sorority, about how often have you done each of the following in that residence unit during the current school year? Indicate your response by filling in one of the spaces to the left of each statement. If you do not live in a campus residence, omit these items.

Very often	Often	Occasionally	Never	Campus Residence
○	○	○	○	Had lively conversations about various topics during dinner in the dining room or cafeteria.
○	○	○	○	Gone out with other students for late night snacks.
○	○	○	○	Offered to help another student (with course work, errands, favors, advice, etc.) who needed some assistance.
○	○	○	○	Participated in discussions that lasted late into the night.
○	○	○	○	Asked others for assistance in something you were doing.
○	○	○	○	Borrowed things (clothes, records posters, books, etc.) from others in the residence unit.
○	○	○	○	Attended social events put on by the residence unit.
○	○	○	○	Studied with other students in the residence unit.
○	○	○	○	Helped plan or organize an event in the residence unit.
○	○	○	○	Worked on some community service or fund raising project with other students in the residence unit.

CONVERSATIONS

DIRECTIONS: In conversations with other students at this college during the current school year, about how often have you talked about each of the following?

Very often	Often	Occasionally	Never	Topics of Conversation
○	○	○	○	Current events in the news.
○	○	○	○	Major social problems such as peace, human rights, equality, justice.
○	○	○	○	Different life styles and customs.
○	○	○	○	The ideas and views of other people such as writers, philosophers, historians.
○	○	○	○	The arts – painting, theatrical productions, ballet, symphony, movies, etc.
○	○	○	○	Science – theories, experiments, methods.
○	○	○	○	Computers and other technologies.
○	○	○	○	Social and ethical issues related to science and technology such as energy, pollution, chemicals, genetics, military use.
○	○	○	○	The economy – employment, wealth, poverty, debt, trade, etc.
○	○	○	○	International relations.

In these conversations with other students, about how often have you done each of the following?

Very often	Often	Occasionally	Never	Information in Conversations
○	○	○	○	Referred to knowledge you had acquired in your reading.
○	○	○	○	Explored different ways of thinking about the topic.
○	○	○	○	Referred to something a professor said about the topic.
○	○	○	○	Subsequently read something that was related to the topic.
○	○	○	○	Changed your opinion as a result of the knowledge or arguments presented by others.
○	○	○	○	Persuaded others to change their minds as a result of the knowledge or arguments you cited.

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READING/WRITING

During the current school year, about how many books have you read? Fill in one space in each column.

Textbooks or assigned books	Non-assigned books
○	○ none
○	○ fewer than 5
○	○ between 5 and 10
○	○ between 10 and 20
○	○ more than 20

During the current school year, about how many written reports have you made? Fill in one space in each column.

Essay exams in your courses	Term papers or other written reports
○	○ none
○	○ fewer than 5
○	○ between 5 and 10
○	○ between 10 and 20
○	○ more than 20

OPINIONS ABOUT COLLEGE

How well do you like college?
- ○ I am enthusiastic about it.
- ○ I like it.
- ○ I am more or less neutral about it.
- ○ I don't like it.

If you could start over again, would you go to the same college you are now attending?
- ○ Yes, definitely
- ○ Probably yes
- ○ Probably no
- ○ No, definitely

THE COLLEGE ENVIRONMENT

Colleges differ from one another in the extent to which they emphasize or stress various aspects of students' development. Thinking of your own experience at this college, to what extent do you feel that each of the following is emphasized? The responses are numbered from 7 to 1, with the highest and lowest points described. Fill in the space of whichever number best indicates your impression on this seven-point rating scale.

Emphasis on the development of academic, scholarly, and intellectual qualities

Strong emphasis ⑦ ⑥ ⑤ ④ ③ ② ① **Weak emphasis**

Emphasis on the development of esthetic, expressive, and creative qualities

Strong emphasis ⑦ ⑥ ⑤ ④ ③ ② ① **Weak emphasis**

Emphasis on being critical, evaluative, and analytical

Strong emphasis ⑦ ⑥ ⑤ ④ ③ ② ① **Weak emphasis**

Emphasis on the development of vocational and occupational competence

Strong emphasis ⑦ ⑥ ⑤ ④ ③ ② ① **Weak emphasis**

Emphasis on the personal relevance and practical values of your courses

Strong emphasis ⑦ ⑥ ⑤ ④ ③ ② ① **Weak emphasis**

The next three ratings refer to relationships among people at the college. Again, thinking of your own experience, how would you rate these relationships on the seven-point scales?

Relationship with other students, student groups, and activities

Friendly, Supportive, Sense of belonging	⑦	⑥	⑤	④	③	②	① **Competitive, Uninvolved, Sense of alienation**

Relationships with faculty members

Approachable, Helpful, Understanding, Encouraging	⑦	⑥	⑤	④	③	②	① **Remote, Discouraging, Unsympathetic**

Relationships with administrative personnel and offices

Helpful, Considerate, Flexible	⑦	⑥	⑤	④	③	②	① **Rigid, Impersonal, Bound by regulations**

ESTIMATE OF GAINS

DIRECTIONS: In thinking over your experiences in college up to now, to what extent do you feel you have gained or made progress in each of the following respects? Indicate your response by filling in one of the spaces to the left of each statement.

Very much	Quite a bit	Some	Very little	
○	○	○	○	Vocational training – acquiring knowledge and skills applicable to a specific job or type of work.
○	○	○	○	Acquiring background and specialization for further education in some professional, scientific, or scholarly field.
○	○	○	○	Gaining a broad general education about different fields of knowledge.
○	○	○	○	Gaining a range of information that may be relevant to a career.
○	○	○	○	Developing an understanding and enjoyment of art, music, and drama.
○	○	○	○	Broadening your acquaintance and enjoyment of literature.
○	○	○	○	Writing clearly and effectively.
○	○	○	○	Acquiring familiarity with the use of computers.
○	○	○	○	Becoming aware of different philosophies, cultures, and ways of life.
○	○	○	○	Developing your own values and ethical standards.
○	○	○	○	Understanding yourself – your abilities, interests, and personality.
○	○	○	○	Understanding other people and the ability to get along with different kinds of people.
○	○	○	○	Ability to function as a team member.
○	○	○	○	Developing good health habits and physical fitness.
○	○	○	○	Understanding the nature of science and experimentation.
○	○	○	○	Understanding new scientific and technical developments.
○	○	○	○	Becoming aware of the consequences (benefits/hazards/dangers/values) of new applications in science and technology.
○	○	○	○	Ability to think analytically and logically.
○	○	○	○	Quantitative thinking – understanding probabilities, proportions, etc.
○	○	○	○	Ability to put ideas together, to see relationships, similarities, and differences between ideas.
○	○	○	○	Ability to learn on your own, pursue ideas, and find information you need.
○	○	○	○	Seeing the importance of history for understanding the present as well as the past.
○	○	○	○	Gaining knowledge about other parts of the world and other people—Asia, Africa, South America, etc.

ADDITIONAL QUESTIONS

1.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	6.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
2.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	7.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
3.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	8.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
4.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	9.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
5.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ	10.	Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

THANK YOU FOR YOUR PARTICIPATION

OTHER ID#, if requested

0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9

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Please respond to the following items in the box at the lower left on the last page of the College Student Experiences Questionnaire. Fill in the circle containing the letter that corresponds to the answer that best describes your feelings or situation.

1. The institution of higher education I attend is

   A. a private liberal arts college with a required work program
   B. a private liberal arts college with no work program requirement
   C. a public (state) university

2. My current work situation is best described as

   A. I work on campus in a setting related to my academic or career interests
   B. I work on campus in a setting unrelated to any of my academic or career interests
   C. I work off-campus in a setting related to my academic or career interests
   D. I work off-campus in a setting unrelated to any of my academic or career interests
   E. I do not have work responsibilities beyond my classes

3. My work experience last academic year was best described as

   A. I worked on campus in a setting related to academic or career interests
   B. I worked on campus in a setting unrelated to any academic or career interests
   C. I worked off-campus in a setting related to academic or career interests
   D. I worked off-campus in a setting unrelated to any academic or career interests
   E. I did not have work responsibilities beyond my classes

4. My most important reason for working is

   A. money
   B. to improve personal skills and knowledge for a job
   C. to improve technical or specific job-related skills
   D. to meet other people
   E. other

5. My second most important reason for working is

   A. money
   B. to improve personal skills and knowledge for a job
   C. to improve technical or specific job-related skills
   D. to meet other people
   E. other

6. I work for money

   A. to help cover direct educational costs, such as tuition and fees
   B. to pay for social and recreational activities beyond academics
   C. to pay off other debts, such as car loans
   D. to pay everyday costs of living, such as rent and food
   E. I do not directly receive money for working

7. I would rate the importance of religious or ethical beliefs in motivating me to work while I'm going to school as

   A. extremely important
   B. very important
   C. important
   D. somewhat important
   E. not at all important

PLEASE CONTINUE WITH THE QUESTIONS ON THE NEXT PAGE

8. I would rate the importance of religious or ethical beliefs in choosing the college I now attend as

   A. extremely important
   B. very important
   C. important
   D. somewhat important
   E. not at all important

9. I would rate the importance of religious or ethical beliefs in influencing the amount of effort I put into my job as

   A. extremely important
   B. very important
   C. important
   D. somewhat important
   E. not at all important

THANKS AGAIN FOR YOUR HELP

Appendix 2

Source Table for Quality of Experience with Library

SOURCE	DF	SS	MS	F	p
MODEL	7	348.128	49.733	1.87	0.081
ERROR	104	2761.301	26.551		
TOTAL	111	3109.429			

Type III Sum of Squares

SOURCE	DF	SS	MS	F	p
INSTITUTION	1	118.089	118.089	4.45	0.037*
CAMPUS	1	181.700	181.700	6.84	0.010*
ACADEMIC	1	7.515	7.515	0.28	0.596
INST*CAMPUS	1	69.390	69.390	2.61	0.109
INST*ACADEMIC	1	100.005	100.005	3.77	0.055
CAMPUS*ACADEMIC	1	129.016	129.016	4.86	0.030*
INST*CAMP*ACAD	1	0.037	0.037	0.00	0.970

*significant at p< or = .05

Appendix 3

Source Table for Quality of Experience with Student Acquaintances

SOURCE	DF	SS	MS	F	p
MODEL	7	1425.577	203.653	4.94	0.000*
ERROR	104	4289.529	41.245		
CORRECTED TOTAL	111	5715.107			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	26.413	26.413	0.64	0.425
CAMPUS	1	923.803	923.803	22.40	0.000*
ACADEMIC	1	105.166	105.166	2.55	0.113
INST*CAMPUS	1	4.192	4.192	0.10	0.750
INST*ACADEMIC	1	2.184	2.184	0.05	0.818
CAMPUS*ACADEMIC	1	104.215	104.215	2.53	0.115
INST*CAMPUS*ACAD	1	0.495	0.495	0.01	0.912

*significant at p< or = .05

Appendix 4

Source Table for Quality of Experience with Faculty

SOURCE	DF	SS	MS	F	p
MODEL	7	526.939	75.277	2.96	0.007*
ERROR	103	2619.168	25.428		
CORRECTED TOTAL	110	3146.108			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	0.019	0.019	0.00	0.977
CAMPUS	1	241.950	241.950	9.51	0.002*
ACADEMIC	1	5.502	5.502	0.22	0.642
INST*CAMPUS	1	4.718	4.718	0.19	0.672
INST*ACADEMIC	1	57.728	57.728	2.27	0.134
CAMPUS*ACADEMIC	1	273.307	273.307	10.75	0.001*
INST*CAMPUS*ACAD	1	8.593	8.593	0.34	0.562

*significant at p< or = .05

Appendix 5

Source Table for Quality of Experience in Courses

SOURCE	DF	SS	MS	F	p
MODEL	7	260.149	37.164	1.54	0.162
ERROR	102	2461.850	24.135		
CORRECTED TOTAL	109	2722.000			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	0.288	0.288	0.01	0.913
CAMPUS	1	4.433	4.433	0.18	0.669
ACADEMIC	1	90.895	90.895	3.77	0.055
INST*CAMPUS	1	100.127	100.127	4.15	0.044*
INST*ACADEMIC	1	6.771	6.771	0.28	0.598
CAMPUS*ACADEMIC	1	5.393	5.393	0.22	0.637
INST*CAMPUS*ACAD	1	76.988	76.988	3.19	0.077

*significant at p< or = .05

Appendix 6

Source Table for Quality of Experience with Art, Music, and Theatre

SOURCE	DF	SS	MS	F	p
MODEL	7	900.015	128.573	2.84	0.009*
ERROR	99	4475.610	45.208		
CORRECTED TOTAL	106	5375.626			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	11.509	11.509	0.25	0.615
CAMPUS	1	414.914	414.914	9.18	0.003*
ACADEMIC	1	31.968	31.968	0.71	0.402
INST*CAMPUS	1	81.868	81.868	1.81	0.181
INST*ACADEMIC	1	1.924	1.924	0.04	0.836
CAMPUS*ACADEMIC	1	48.036	48.036	1.06	0.305
INST*CAMPUS*ACAD	1	19.302	19.302	0.43	0.515

*significant at p< or = .05

Appendix 7

Source Table for Quality of Experience with Student Union

SOURCE	DF	SS	MS	F	p
MODEL	7	667.318	95.331	2.49	0.021*
ERROR	102	3905.999	38.294		
CORRECTED TOTAL	109	4573.318			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	114.947	114.947	3.00	0.086
CAMPUS	1	515.815	515.815	13.47	0.000*
ACADEMIC	1	3.590	3.590	0.09	0.760
INST*CAMPUS	1	16.330	16.330	0.43	0.515
INST*ACADEMIC	1	18.137	18.137	0.47	0.492
CAMPUS*ACADEMIC	1	174.518	174.518	4.56	0.035*
INST*CAMPUS*ACAD	1	4.677	4.677	0.12	0.727

*significant at p< or = .05

Appendix 8

Source Table for Quality of Experience with Athletics

SOURCE	DF	SS	MS	F	p
MODEL	7	1014.152	144.878	2.59	0.017*
ERROR	102	5713.338	56.013		
CORRECTED TOTAL	109	6727.490			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	18.977	18.977	0.34	0.561
CAMPUS	1	389.583	389.583	6.96	0.009*
ACADEMIC	1	46.320	46.320	0.83	0.365
INST*CAMPUS	1	24.487	24.487	0.44	0.510
INST*ACADEMIC	1	146.911	146.911	2.62	0.108
CAMPUS*ACADEMIC	1	66.806	66.806	1.19	0.277
INST*CAMPUS*ACAD	1	23.353	23.353	0.42	0.519

*significant at p< or = .05

Appendix 9

Source Table for Quality of Experience with Clubs

SOURCE	DF	SS	MS	F	p
MODEL	7	2977.731	425.390	7.34	0.000*
ERROR	100	5793.268	57.932		
CORRECTED TOTAL	107	8771.000			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	9.232	9.232	0.16	0.690
CAMPUS	1	1462.455	1462.455	25.24	0.000*
ACADEMIC	1	3.413	3.413	0.06	0.808
INST*CAMPUS	1	48.596	48.596	0.84	0.361
INST*ACADEMIC	1	0.098	0.098	0.00	0.967
CAMPUS*ACADEMIC	1	125.720	125.720	2.17	0.143
INST*CAMPUS*ACAD	1	29.065	29.065	0.50	0.480

*significant at p< or = .05

Appendix 10

Source Table for Quality of Experience with Writing

SOURCE	DF	SS	MS	F	p
MODEL	7	224.435	32.062	0.87	0.531
ERROR	103	3789.041	36.786		
CORRECTED TOTAL	110	4013.477			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	1.140	1.140	0.03	0.860
CAMPUS	1	0.744	0.744	0.02	0.887
ACADEMIC	1	22.818	22.818	0.62	0.432
INST*CAMPUS	1	8.088	8.088	0.22	0.640
INST*ACADEMIC	1	44.787	44.787	1.22	0.272
CAMPUS*ACADEMIC	1	20.744	20.744	0.56	0.454
INST*CAMPUS*ACAD	1	18.752	18.752	0.51	0.476

*significant at p< or = .05

Appendix 11

Source Table for Quality of Experience in Personal Life

SOURCE	DF	SS	MS	F	p
MODEL	7	563.526	80.503	2.81	0.010*
ERROR	101	2897.152	28.684		
CORRECTED TOTAL	108	3460.678			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	0.606	0.606	0.02	0.884
CAMPUS	1	408.311	408.311	14.23	0.000*
ACADEMIC	1	8.092	8.092	0.28	0.596
INST*CAMPUS	1	0.447	0.447	0.02	0.900
INST*ACADEMIC	1	2.638	2.638	0.09	0.762
CAMPUS*ACADEMIC	1	91.019	91.019	3.17	0.077
INST*CAMPUS*ACAD	1	3.144	3.144	0.11	0.741

*significant at p< or = .05

Appendix 12

Source Table for Quality of Experience with Science

SOURCE	DF	SS	MS	F	p
MODEL	7	359.750	51.392	1.17	0.329
ERROR	101	4453.662	44.095		
CORRECTED TOTAL	108	4813.412			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	0.012	0.012	0.00	0.986
CAMPUS	1	147.966	147.966	3.36	0.069
ACADEMIC	1	0.072	0.072	0.00	0.967
INST*CAMPUS	1	0.989	0.989	0.02	0.881
INST*ACADEMIC	1	4.470	4.470	0.10	0.750
CAMPUS*ACADEMIC	1	3.529	3.529	0.08	0.777
INST*CAMPUS*ACAD	1	11.744	11.744	0.27	0.606

*significant at p< or = .05

Appendix 13

Source Table for Quality of Experience in Residence Facilities

SOURCE	DF	SS	MS	F	p
MODEL	4	314.489	78.622	2.29	0.068
ERROR	69	2374.051	34.406		
CORRECTED TOTAL	73	2688.540			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	0.406	0.406	0.01	0.913
CAMPUS	1	166.331	166.331	4.83	0.032*
ACADEMIC	1	1.192	1.192	0.03	0.852
INST*CAMPUS	0	0.000	. . .		
INST*ACADEMIC	1	6.144	6.144	0.18	0.673
CAMPUS*ACADEMIC	0	0.000	. . .		
INST*CAMPUS*ACAD	0	0.000	. . .		

*significant at p< or = .05

Appendix 14

Source Table for Evaluation of Academic, Scholarly Emphasis of Campus

SOURCE	DF	SS	MS	F	p
MODEL	7	9.614	1.373	1.02	0.423
ERROR	104	140.350	1.350		
TOTAL	111	149.964			

Type III Sum of Squares

SOURCE	DF	SS	MS	F	p
INSTITUTION	1	3.350	3.350	2.48	0.1182
CAMPUS	1	0.262	0.262	0.19	0.6605
ACADEMIC	1	0.044	0.044	0.03	0.8571
INST*CAMPUS	1	1.236	1.236	0.92	0.3408
INST*ACADEMIC	1	0.076	0.076	0.06	0.8124
CAMPUS*ACADEMIC	1	2.543	2.543	1.88	0.1728
INST*CAMP*ACAD	1	1.384	1.384	1.03	0.3135

*significant at p< or = .05

Appendix 15

Source Table for Evaluation of Aesthetic, Expressive, and Creative Emphasis of Campus

SOURCE	DF	SS	MS	F	p
MODEL	7	20.187	2.883	1.88	0.080
ERROR	104	159.803	1.536		
CORRECTED TOTAL	111	179.991			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	2.961	2.961	1.93	0.168
CAMPUS	1	0.387	0.387	0.25	0.616
ACADEMIC	1	1.655	1.655	1.08	0.301
INST*CAMPUS	1	1.503	1.503	0.98	0.324
INST*ACADEMIC	1	0.467	0.467	0.30	0.582
CAMPUS*ACADEMIC	1	3.442	3.442	2.24	0.137
INST*CAMPUS*ACAD	1	2.700	2.700	1.76	0.187

*significant at p< or = .05

Appendix 16

Source Table for Evaluation of Critical, Evaluative Emphasis of Campus

SOURCE	DF	SS	MS	F	p
MODEL	7	12.735	1.819	1.39	0.219
ERROR	103	135.227	1.312		
CORRECTED TOTAL	110	147.963			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	1.548	1.548	1.18	0.279
CAMPUS	1	0.262	0.262	0.20	0.655
ACADEMIC	1	2.199	2.199	1.68	0.198
INST*CAMPUS	1	0.418	0.418	0.32	0.573
INST*ACADEMIC	1	0.577	0.577	0.44	0.508
CAMPUS*ACADEMIC	1	0.994	0.994	0.76	0.386
INST*CAMPUS*ACAD	1	0.391	0.391	0.30	0.586

*significant at p< or = .05

Appendix 17

Source Table for Evaluation of Vocational and Occupational Competence Emphasis of Campus

SOURCE	DF	SS	MS	F	p
MODEL	7	34.572	4.938	2.45	0.023*
ERROR	104	209.704	2.016		
CORRECTED TOTAL	111	244.276			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	6.918	6.918	3.43	0.066
CAMPUS	1	0.866	0.866	0.43	0.513
ACADEMIC	1	0.037	0.037	0.02	0.891
INST*CAMPUS	1	4.113	4.113	2.04	0.156
INST*ACADEMIC	1	0.050	0.050	0.02	0.875
CAMPUS*ACADEMIC	1	9.578	9.578	4.75	0.031*
INST*CAMPUS*ACAD	1	9.170	9.170	4.55	0.035*

*significant at p< or = .05

Appendix 18

Source Table for Evaluation of Personal Relevance and Practical Values Emphasis of Campus

SOURCE	DF	SS	MS	F	p
MODEL	7	20.496	2.928	1.56	0.155
ERROR	104	195.182	1.876		
CORRECTED TOTAL	111	215.678			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	0.005	0.005	0.00	0.955
CAMPUS	1	1.089	1.089	0.58	0.447
ACADEMIC	1	4.573	4.573	2.44	0.121
INST*CAMPUS	1	0.207	0.207	0.11	0.740
INST*ACADEMIC	1	0.015	0.015	0.01	0.929
CAMPUS*ACADEMIC	1	1.186	1.186	0.63	0.428
INST*CAMPUS*ACAD	1	1.661	1.661	0.89	0.348

*significant at p< or = .05

Appendix 19

Source table for Overall Satisfaction Index

SOURCE	DF	SS	MS	F	p
MODEL	7	14.506	2.072	1.11	0.361
ERROR	104	193.771	1.863		
TOTAL	111	208.277			

Type III Sum of Squares

SOURCE	DF	SS	MS	F	p
INSTITUTION	1	5.111	5.111	2.74	0.101
CAMPUS	1	0.817	0.817	0.44	0.509
ACADEMIC	1	0.007	0.007	0.00	0.950
INST*CAMPUS	1	0.352	0.352	0.19	0.665
INST*ACADEMIC	1	0.051	0.051	0.03	0.870
CAMPUS*ACADEMIC	1	2.661	2.661	1.43	0.235
INST*CAMP*ACAD	1	0.191	0.191	0.10	0.750

*significant at p< or = .05

Appendix 20

Source table for Self-Assessment of Average Gains During College

SOURCE	DF	SS	MS	F	p
MODEL	7	4.285	0.612	3.52	0.002*
ERROR	103	17.915	0.174		
TOTAL	110	22.199			

*significant at p< or = 0.05

Type III Sum of Squares for Average Gains

SOURCE	DF	SS	MS	F	p
INSTITUTION	1	0.120	0.120	0.69	0.407
CAMPUS	1	0.732	0.732	4.21	0.043*
ACADEMIC	1	0.147	0.147	0.85	0.360
INST*CAMPUS	1	0.000	0.000	0.00	0.998
INST*ACADEMIC	1	1.276	1.276	7.34	0.008*
CAMPUS*ACADEMIC	1	1.560	1.560	8.97	0.003*
INST*CAMP*ACAD	1	0.079	0.079	0.46	0.501

*significant at p< or = 0.05

Appendix 21

Source Table for Self-Assessment of Gains in Analytic Skills During College

SOURCE	DF	SS	MS	F	p
MODEL	7	3.338	0.476	1.68	0.121
ERROR	103	29.192			
CORRECTED TOTAL	110	32.530			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	0.091	0.091	0.32	0.571
CAMPUS	1	0.151	0.151	0.54	0.465
ACADEMIC	1	0.370	0.370	1.31	0.255
INST*CAMPUS	1	0.007	0.007	0.02	0.874
INST*ACADEMIC	1	1.227	1.227	4.33	0.039*
CAMPUS*ACADEMIC	1	0.769	0.769	2.72	0.102
INST*CAMPUS*ACAD	1	0.032	0.032	0.11	0.736

*significant at p< or = .05

Appendix 22

Source Table for Self-Assessment of Gains in Liberal Arts Knowledge During College

SOURCE	DF	SS	MS	F	p
MODEL	7	4.989	0.712	1.83	0.090
ERROR	103	40.221	0.390		
CORRECTED TOTAL	110	45.210			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	0.067	0.067	0.17	0.679
CAMPUS	1	0.493	0.493	1.26	0.263
ACADEMIC	1	0.108	0.108	0.28	0.598
INST*CAMPUS	1	0.129	0.129	0.33	0.565
INST*ACADEMIC	1	1.265	1.265	3.24	0.074
CAMPUS*ACADEMIC	1	1.768	1.768	4.53	0.035*
INST*CAMPUS*ACAD	1	0.204	0.204	0.52	0.471

*significant at p< or = .05

Appendix 23

Source Table for Self-Assessment of Gains in Science During College

SOURCE	DF	SS	MS	F	p
MODEL	7	9.716	1.388	2.24	0.036*
ERROR	103	63.726	0.618		
CORRECTED TOTAL	110	73.443			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	0.100	0.100	0.16	0.687
CAMPUS	1	3.906	3.906	6.31	0.013*
ACADEMIC	1	0.145	0.145	0.24	0.628
INST*CAMPUS	1	0.207	0.207	0.34	0.564
INST*ACADEMIC	1	3.742	3.742	6.05	0.015*
CAMPUS*ACADEMIC	1	3.325	3.325	5.37	0.022*
INST*CAMPUS*ACAD	1	0.298	0.298	0.48	0.482

*significant at p< or = .05

Appendix 24

Source Table for Self-Assessment of Gains in Vocational Competence During College

SOURCE	DF	SS	MS	F	p
MODEL	7	6.062	0.866	2.55	0.018*
ERROR	103	35.026	0.340		
CORRECTED TOTAL	110	41.088			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	0.260	0.260	0.77	0.383
CAMPUS	1	0.285	0.285	0.84	0.361
ACADEMIC	1	0.407	0.407	1.20	0.276
INST*CAMPUS	1	0.066	0.066	0.20	0.658
INST*ACADEMIC	1	1.356	1.356	3.99	0.048*
CAMPUS*ACADEMIC	1	2.398	2.398	7.05	0.009*
INST*CAMPUS*ACAD	1	0.014	0.014	0.04	0.836

*significant at p< or = .05

Appendix 25

Source Table for Self-Assessment of Gains in Adaptive Behaviors During College

SOURCE	DF	SS	MS	F	p
MODEL	7	5.105	0.729	1.74	0.108
ERROR	103	43.258	0.419		
CORRECTED TOTAL	110	48.363			

Type III Sum of Squares

SOURCE	DF	TYPE III SS	MS	F	p
INSTITUTION	1	0.256	0.256	0.61	0.436
CAMPUS	1	2.566	2.566	6.11	0.015*
ACADEMIC	1	0.176	0.176	0.42	0.517
INST*CAMPUS	1	0.050	0.050	0.12	0.730
INST*ACADEMIC	1	0.138	0.138	0.33	0.567
CAMPUS*ACADEMIC	1	1.068	1.068	2.54	0.113
INST*CAMPUS*ACAD	1	0.004	0.004	0.01	0.915

*significant at p< or = .05